

April 17, 2012

DIANA MARQUEZ
BURNS & MCDONNELL
9400 WARD PARKWAY
Kansas City, MO 64114

RE: Project: QAS
Pace Project No.: 60118562

Dear DIANA MARQUEZ:

Enclosed are the analytical results for sample(s) received by the laboratory on April 02, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown

Angie.Brown@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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Page 1 of 30

CERTIFICATIONS

Project: QAS

Pace Project No.: 60118562

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

A2LA Certification #: 2456.01

Arkansas Certification #: 05-008-0

Illinois Certification #: 001191

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-08-TX

Utah Certification #: 9135995665

REPORT OF LABORATORY ANALYSIS

Page 2 of 30

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SAMPLE SUMMARY

Project: QAS
Pace Project No.: 60118562

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60118562001	GW-4 FP-1	Solid	04/02/12 08:45	04/02/12 10:43
60118562002	GW-3 FP-1	Solid	04/02/12 09:25	04/02/12 10:43
60118562003	EP R-1 FP-1	Solid	04/02/12 10:00	04/02/12 10:43
60118562004	GW-4 FP-1	Non Aqueous	04/02/12 08:45	04/02/12 10:43
60118562005	GW-3 FP-1	Non Aqueous	04/02/12 09:25	04/02/12 10:43
60118562006	EP R-1 FP-1	Non Aqueous	04/02/12 10:00	04/02/12 10:43

REPORT OF LABORATORY ANALYSIS

Page 3 of 30

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SAMPLE ANALYTE COUNT

Project: QAS
Pace Project No.: 60118562

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60118562001	GW-4 FP-1	EPA 6010	SMW	7
		EPA 7470	TDS	1
		EPA 8270	JMT	18
		EPA 8260	RAB	14
		ASTM D2974-87	DWC	1
		EPA 1010	OL	1
60118562002	GW-3 FP-1	EPA 6010	SMW	7
		EPA 7470	TDS	1
		EPA 8270	JMT	18
		EPA 8260	RAB	14
		ASTM D2974-87	DWC	1
		EPA 1010	OL	1
60118562003	EP R-1 FP-1	EPA 6010	SMW	7
		EPA 7470	TDS	1
		EPA 8270	JMT	18
		EPA 8260	RAB	14
		ASTM D2974-87	DWC	1
		EPA 1010	OL	1
60118562004	GW-4 FP-1	EPA 8082	NAW	9
60118562005	GW-3 FP-1	EPA 8082	NAW	9
60118562006	EP R-1 FP-1	EPA 8082	NAW	9

REPORT OF LABORATORY ANALYSIS

Page 4 of 30

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PROJECT NARRATIVE

Project: QAS
Pace Project No.: 60118562

Method: EPA 8082
Description: 8082 GCS PCB
Client: BURNS & MCDONNELL
Date: April 17, 2012

General Information:

3 samples were analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3580 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/32756

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- EP R-1 FP-1 (Lab ID: 60118562006)
 - Decachlorobiphenyl (S)
 - Tetrachloro-m-xylene (S)
- GW-3 FP-1 (Lab ID: 60118562005)
 - Decachlorobiphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: OEXT/32756

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60118562005

M3: Matrix spike recovery was outside laboratory control limits due to matrix interferences.

- MS (Lab ID: 980697)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 980698)
 - PCB-1260 (Aroclor 1260)

REPORT OF LABORATORY ANALYSIS

Page 5 of 30

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PROJECT NARRATIVE

Project: QAS
Pace Project No.: 60118562

Method: EPA 8082
Description: 8082 GCS PCB
Client: BURNS & MCDONNELL
Date: April 17, 2012

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

SAMPLE MATRIX IS OIL.

- GW-4 FP-1 (Lab ID: 60118562004)
- GW-3 FP-1 (Lab ID: 60118562005)
- EP R-1 FP-1 (Lab ID: 60118562006)

SAMPLE MATRIX IS AN OILY SLUDGE.

- GW-4 FP-1 (Lab ID: 60118562004)
- GW-3 FP-1 (Lab ID: 60118562005)
- EP R-1 FP-1 (Lab ID: 60118562006)

Analyte Comments:

QC Batch: OEXT/32756

1e: Surrogate recovery outside laboratory control limits due to matrix interferences.

- MS (Lab ID: 980697)
 - Decachlorobiphenyl (S)
 - Tetrachloro-m-xylene (S)

REPORT OF LABORATORY ANALYSIS

Page 6 of 30

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PROJECT NARRATIVE

Project: QAS
Pace Project No.: 60118562

Method: EPA 6010
Description: 6010 MET ICP, TCLP
Client: BURNS & MCDONNELL
Date: April 17, 2012

General Information:

3 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

SAMPLE MATRIX IS AN OILY SLUDGE.

- GW-4 FP-1 (Lab ID: 60118562001)
- GW-3 FP-1 (Lab ID: 60118562002)
- EP R-1 FP-1 (Lab ID: 60118562003)

REPORT OF LABORATORY ANALYSIS

Page 7 of 30

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PROJECT NARRATIVE

Project: QAS
Pace Project No.: 60118562

Method: EPA 7470
Description: 7470 Mercury, TCLP
Client: BURNS & MCDONNELL
Date: April 17, 2012

General Information:

3 samples were analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

SAMPLE MATRIX IS AN OILY SLUDGE.

- GW-4 FP-1 (Lab ID: 60118562001)
- GW-3 FP-1 (Lab ID: 60118562002)
- EP R-1 FP-1 (Lab ID: 60118562003)

REPORT OF LABORATORY ANALYSIS

Page 8 of 30

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PROJECT NARRATIVE

Project: QAS
Pace Project No.: 60118562

Method: EPA 8270
Description: 8270 MSSV TCLP Sep Funnel
Client: BURNS & MCDONNELL
Date: April 17, 2012

General Information:

3 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

SAMPLE MATRIX IS AN OILY SLUDGE.

- GW-4 FP-1 (Lab ID: 60118562001)
- GW-3 FP-1 (Lab ID: 60118562002)
- EP R-1 FP-1 (Lab ID: 60118562003)

REPORT OF LABORATORY ANALYSIS

Page 9 of 30

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PROJECT NARRATIVE

Project: QAS
Pace Project No.: 60118562

Method: EPA 8260
Description: 8260 MSV TCLP
Client: BURNS & MCDONNELL
Date: April 17, 2012

General Information:

3 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

SAMPLE MATRIX IS AN OILY SLUDGE.

- GW-4 FP-1 (Lab ID: 60118562001)
- GW-3 FP-1 (Lab ID: 60118562002)
- EP R-1 FP-1 (Lab ID: 60118562003)

REPORT OF LABORATORY ANALYSIS

Page 10 of 30

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PROJECT NARRATIVE

Project: QAS
Pace Project No.: 60118562

Method: EPA 1010
Description: 1010 Flashpoint,Closed Cup
Client: BURNS & MCDONNELL
Date: April 17, 2012

General Information:

3 samples were analyzed for EPA 1010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

SAMPLE MATRIX IS AN OILY SLUDGE.

- GW-4 FP-1 (Lab ID: 60118562001)
- GW-3 FP-1 (Lab ID: 60118562002)
- EP R-1 FP-1 (Lab ID: 60118562003)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Page 11 of 30

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ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: GW-4 FP-1 **Lab ID:** 60118562001 **Collected:** 04/02/12 08:45 **Received:** 04/02/12 10:43 **Matrix:** Solid

Results reported on a "dry-weight" basis

Comments: • SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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6010 MET ICP, TCLP

Analytical Method: EPA 6010 Preparation Method: EPA 3010

Leachate Method/Date: EPA 1311; 04/03/12 00:00

Arsenic	ND mg/L	0.50	1	04/04/12 10:55	04/10/12 18:54	7440-38-2
Barium	ND mg/L	2.5	1	04/04/12 10:55	04/10/12 18:54	7440-39-3
Cadmium	ND mg/L	0.050	1	04/04/12 10:55	04/10/12 18:54	7440-43-9
Chromium	ND mg/L	0.10	1	04/04/12 10:55	04/10/12 18:54	7440-47-3
Lead	ND mg/L	0.50	1	04/04/12 10:55	04/10/12 18:54	7439-92-1
Selenium	ND mg/L	0.50	1	04/04/12 10:55	04/10/12 18:54	7782-49-2
Silver	ND mg/L	0.10	1	04/04/12 10:55	04/10/12 18:54	7440-22-4

7470 Mercury, TCLP

Analytical Method: EPA 7470 Preparation Method: EPA 7470

Leachate Method/Date: EPA 1311; 04/03/12 00:00

Mercury	ND ug/L	2.0	1	04/09/12 11:55	04/09/12 17:24	7439-97-6
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8270 MSSV TCLP Sep Funnel

Analytical Method: EPA 8270 Preparation Method: EPA 3510

Leachate Method/Date: EPA 1311; 04/05/12 00:00

1,4-Dichlorobenzene	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	106-46-7
2,4-Dinitrotoluene	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	121-14-2
Hexachloro-1,3-butadiene	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	87-68-3
Hexachlorobenzene	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	118-74-1
Hexachloroethane	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	67-72-1
2-Methylphenol(o-Cresol)	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	95-48-7
3&4-Methylphenol(m&p Cresol)	ND ug/L	200	1	04/09/12 00:00	04/12/12 22:14	
Nitrobenzene	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	98-95-3
Pentachlorophenol	ND ug/L	500	1	04/09/12 00:00	04/12/12 22:14	87-86-5
Pyridine	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	110-86-1
2,4,5-Trichlorophenol	ND ug/L	500	1	04/09/12 00:00	04/12/12 22:14	95-95-4
2,4,6-Trichlorophenol	ND ug/L	100	1	04/09/12 00:00	04/12/12 22:14	88-06-2
Surrogates						
Nitrobenzene-d5 (S)	68 %	42-120	1	04/09/12 00:00	04/12/12 22:14	4165-60-0
2-Fluorobiphenyl (S)	69 %	43-120	1	04/09/12 00:00	04/12/12 22:14	321-60-8
Terphenyl-d14 (S)	74 %	38-120	1	04/09/12 00:00	04/12/12 22:14	1718-51-0
Phenol-d6 (S)	64 %	41-120	1	04/09/12 00:00	04/12/12 22:14	13127-88-3
2-Fluorophenol (S)	64 %	40-120	1	04/09/12 00:00	04/12/12 22:14	367-12-4
2,4,6-Tribromophenol (S)	76 %	38-126	1	04/09/12 00:00	04/12/12 22:14	118-79-6

8260 MSV TCLP

Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 04/05/12 00:00

Benzene	ND ug/L	50.0	1	04/14/12 20:29	71-43-2
2-Butanone (MEK)	ND ug/L	1000	1	04/14/12 20:29	78-93-3
Carbon tetrachloride	ND ug/L	50.0	1	04/14/12 20:29	56-23-5
Chlorobenzene	ND ug/L	50.0	1	04/14/12 20:29	108-90-7
Chloroform	ND ug/L	200	1	04/14/12 20:29	67-66-3
1,2-Dichloroethane	ND ug/L	50.0	1	04/14/12 20:29	107-06-2
1,1-Dichloroethene	ND ug/L	50.0	1	04/14/12 20:29	75-35-4
Tetrachloroethene	ND ug/L	50.0	1	04/14/12 20:29	127-18-4

Date: 04/17/2012 02:36 PM

REPORT OF LABORATORY ANALYSIS

Page 12 of 30

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ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: GW-4 FP-1 **Lab ID:** 60118562001 **Collected:** 04/02/12 08:45 **Received:** 04/02/12 10:43 **Matrix:** Solid

Results reported on a "dry-weight" basis

Comments: • SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP								
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 04/05/12 00:00								
Trichloroethene	ND	ug/L	50.0	1		04/14/12 20:29	79-01-6	
Vinyl chloride	ND	ug/L	100	1		04/14/12 20:29	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	83-120	1		04/14/12 20:29	17060-07-0	
Toluene-d8 (S)	100	%	81-117	1		04/14/12 20:29	2037-26-5	
4-Bromofluorobenzene (S)	100	%	82-121	1		04/14/12 20:29	460-00-4	
Dibromofluoromethane (S)	100	%	85-113	1		04/14/12 20:29	1868-53-7	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	20.4	%	0.50	1		04/04/12 00:00		
1010 Flashpoint,Closed Cup								
Analytical Method: EPA 1010								
Flashpoint	120	deg F	78.0	1		04/12/12 13:00		
Flashpoint	120	deg F	78.0	1		04/12/12 13:00		

ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: GW-3 FP-1 **Lab ID:** 60118562002 **Collected:** 04/02/12 09:25 **Received:** 04/02/12 10:43 **Matrix:** Solid

Results reported on a "dry-weight" basis

Comments: • SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Leachate Method/Date: EPA 1311; 04/03/12 00:00								
Arsenic	ND mg/L		0.50	1	04/04/12 10:55	04/10/12 18:58	7440-38-2	
Barium	ND mg/L		2.5	1	04/04/12 10:55	04/10/12 18:58	7440-39-3	
Cadmium	ND mg/L		0.050	1	04/04/12 10:55	04/10/12 18:58	7440-43-9	
Chromium	ND mg/L		0.10	1	04/04/12 10:55	04/10/12 18:58	7440-47-3	
Lead	ND mg/L		0.50	1	04/04/12 10:55	04/10/12 18:58	7439-92-1	
Selenium	ND mg/L		0.50	1	04/04/12 10:55	04/10/12 18:58	7782-49-2	
Silver	ND mg/L		0.10	1	04/04/12 10:55	04/10/12 18:58	7440-22-4	
7470 Mercury, TCLP								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Leachate Method/Date: EPA 1311; 04/03/12 00:00								
Mercury	ND ug/L		2.0	1	04/09/12 11:55	04/09/12 17:31	7439-97-6	
8270 MSSV TCLP Sep Funnel								
Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Leachate Method/Date: EPA 1311; 04/05/12 00:00								
1,4-Dichlorobenzene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	106-46-7	
2,4-Dinitrotoluene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	121-14-2	
Hexachloro-1,3-butadiene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	87-68-3	
Hexachlorobenzene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	118-74-1	
Hexachloroethane	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	67-72-1	
2-Methylphenol(o-Cresol)	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/L		200	1	04/09/12 00:00	04/12/12 22:34		
Nitrobenzene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	98-95-3	
Pentachlorophenol	ND ug/L		500	1	04/09/12 00:00	04/12/12 22:34	87-86-5	
Pyridine	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	110-86-1	
2,4,5-Trichlorophenol	ND ug/L		500	1	04/09/12 00:00	04/12/12 22:34	95-95-4	
2,4,6-Trichlorophenol	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:34	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	61 %		42-120	1	04/09/12 00:00	04/12/12 22:34	4165-60-0	
2-Fluorobiphenyl (S)	65 %		43-120	1	04/09/12 00:00	04/12/12 22:34	321-60-8	
Terphenyl-d14 (S)	74 %		38-120	1	04/09/12 00:00	04/12/12 22:34	1718-51-0	
Phenol-d6 (S)	62 %		41-120	1	04/09/12 00:00	04/12/12 22:34	13127-88-3	
2-Fluorophenol (S)	60 %		40-120	1	04/09/12 00:00	04/12/12 22:34	367-12-4	
2,4,6-Tribromophenol (S)	76 %		38-126	1	04/09/12 00:00	04/12/12 22:34	118-79-6	
8260 MSV TCLP								
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 04/05/12 00:00								
Benzene	ND ug/L		50.0	1		04/14/12 20:45	71-43-2	
2-Butanone (MEK)	ND ug/L		1000	1		04/14/12 20:45	78-93-3	
Carbon tetrachloride	ND ug/L		50.0	1		04/14/12 20:45	56-23-5	
Chlorobenzene	ND ug/L		50.0	1		04/14/12 20:45	108-90-7	
Chloroform	ND ug/L		200	1		04/14/12 20:45	67-66-3	
1,2-Dichloroethane	ND ug/L		50.0	1		04/14/12 20:45	107-06-2	
1,1-Dichloroethene	ND ug/L		50.0	1		04/14/12 20:45	75-35-4	
Tetrachloroethene	ND ug/L		50.0	1		04/14/12 20:45	127-18-4	

Date: 04/17/2012 02:36 PM

REPORT OF LABORATORY ANALYSIS

Page 14 of 30

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ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: GW-3 FP-1 **Lab ID:** 60118562002 Collected: 04/02/12 09:25 Received: 04/02/12 10:43 Matrix: Solid

Results reported on a "dry-weight" basis

Comments: • SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP								
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 04/05/12 00:00								
Trichloroethene	ND	ug/L	50.0	1		04/14/12 20:45	79-01-6	
Vinyl chloride	ND	ug/L	100	1		04/14/12 20:45	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%	83-120	1		04/14/12 20:45	17060-07-0	
Toluene-d8 (S)	103	%	81-117	1		04/14/12 20:45	2037-26-5	
4-Bromofluorobenzene (S)	100	%	82-121	1		04/14/12 20:45	460-00-4	
Dibromofluoromethane (S)	103	%	85-113	1		04/14/12 20:45	1868-53-7	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	88.5	%	0.50	1		04/04/12 00:00		
1010 Flashpoint,Closed Cup								
Analytical Method: EPA 1010								
Flashpoint	>210	deg F	78.0	1		04/12/12 13:00		

ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: EP R-1 FP-1 **Lab ID:** 60118562003 **Collected:** 04/02/12 10:00 **Received:** 04/02/12 10:43 **Matrix:** Solid

Results reported on a "dry-weight" basis

Comments: • SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Leachate Method/Date: EPA 1311; 04/03/12 00:00								
Arsenic	ND mg/L		0.50	1	04/04/12 10:55	04/10/12 19:01	7440-38-2	
Barium	ND mg/L		2.5	1	04/04/12 10:55	04/10/12 19:01	7440-39-3	
Cadmium	ND mg/L		0.050	1	04/04/12 10:55	04/10/12 19:01	7440-43-9	
Chromium	ND mg/L		0.10	1	04/04/12 10:55	04/10/12 19:01	7440-47-3	
Lead	ND mg/L		0.50	1	04/04/12 10:55	04/10/12 19:01	7439-92-1	
Selenium	ND mg/L		0.50	1	04/04/12 10:55	04/10/12 19:01	7782-49-2	
Silver	ND mg/L		0.10	1	04/04/12 10:55	04/10/12 19:01	7440-22-4	
7470 Mercury, TCLP								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Leachate Method/Date: EPA 1311; 04/03/12 00:00								
Mercury	ND ug/L		2.0	1	04/09/12 11:55	04/09/12 17:33	7439-97-6	
8270 MSSV TCLP Sep Funnel								
Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Leachate Method/Date: EPA 1311; 04/05/12 00:00								
1,4-Dichlorobenzene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	106-46-7	
2,4-Dinitrotoluene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	121-14-2	
Hexachloro-1,3-butadiene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	87-68-3	
Hexachlorobenzene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	118-74-1	
Hexachloroethane	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	67-72-1	
2-Methylphenol(o-Cresol)	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/L		200	1	04/09/12 00:00	04/12/12 22:55		
Nitrobenzene	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	98-95-3	
Pentachlorophenol	ND ug/L		500	1	04/09/12 00:00	04/12/12 22:55	87-86-5	
Pyridine	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	110-86-1	
2,4,5-Trichlorophenol	ND ug/L		500	1	04/09/12 00:00	04/12/12 22:55	95-95-4	
2,4,6-Trichlorophenol	ND ug/L		100	1	04/09/12 00:00	04/12/12 22:55	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	62 %		42-120	1	04/09/12 00:00	04/12/12 22:55	4165-60-0	
2-Fluorobiphenyl (S)	63 %		43-120	1	04/09/12 00:00	04/12/12 22:55	321-60-8	
Terphenyl-d14 (S)	73 %		38-120	1	04/09/12 00:00	04/12/12 22:55	1718-51-0	
Phenol-d6 (S)	57 %		41-120	1	04/09/12 00:00	04/12/12 22:55	13127-88-3	
2-Fluorophenol (S)	58 %		40-120	1	04/09/12 00:00	04/12/12 22:55	367-12-4	
2,4,6-Tribromophenol (S)	73 %		38-126	1	04/09/12 00:00	04/12/12 22:55	118-79-6	
8260 MSV TCLP								
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 04/05/12 00:00								
Benzene	ND ug/L		50.0	1		04/14/12 21:01	71-43-2	
2-Butanone (MEK)	ND ug/L		1000	1		04/14/12 21:01	78-93-3	
Carbon tetrachloride	ND ug/L		50.0	1		04/14/12 21:01	56-23-5	
Chlorobenzene	ND ug/L		50.0	1		04/14/12 21:01	108-90-7	
Chloroform	ND ug/L		200	1		04/14/12 21:01	67-66-3	
1,2-Dichloroethane	ND ug/L		50.0	1		04/14/12 21:01	107-06-2	
1,1-Dichloroethene	ND ug/L		50.0	1		04/14/12 21:01	75-35-4	
Tetrachloroethene	ND ug/L		50.0	1		04/14/12 21:01	127-18-4	

Date: 04/17/2012 02:36 PM

REPORT OF LABORATORY ANALYSIS

Page 16 of 30

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ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: EP R-1 FP-1 **Lab ID:** 60118562003 Collected: 04/02/12 10:00 Received: 04/02/12 10:43 Matrix: Solid

Results reported on a "dry-weight" basis

Comments: • SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP								
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 04/05/12 00:00								
Trichloroethene	ND	ug/L	50.0	1		04/14/12 21:01	79-01-6	
Vinyl chloride	ND	ug/L	100	1		04/14/12 21:01	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	83-120	1		04/14/12 21:01	17060-07-0	
Toluene-d8 (S)	101	%	81-117	1		04/14/12 21:01	2037-26-5	
4-Bromofluorobenzene (S)	100	%	82-121	1		04/14/12 21:01	460-00-4	
Dibromofluoromethane (S)	100	%	85-113	1		04/14/12 21:01	1868-53-7	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	34.5	%	0.50	1		04/04/12 00:00		
1010 Flashpoint,Closed Cup								
Analytical Method: EPA 1010								
Flashpoint	95	deg F	78.0	1		04/12/12 13:00		
Flashpoint	95	deg F	78.0	1		04/12/12 13:00		

ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: GW-4 FP-1 **Lab ID:** 60118562004 Collected: 04/02/12 08:45 Received: 04/02/12 10:43 Matrix: Non Aqueous Liquid

Results reported on a "dry-weight" basis

Comments:

- SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB								
Analytical Method: EPA 8082 Preparation Method: EPA 3580								
PCB-1016 (Aroclor 1016)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 13:27	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 13:27	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 13:27	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 13:27	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 13:27	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 13:27	11097-69-1	
PCB-1260 (Aroclor 1260)	1.8	mg/kg	1.0	1	04/11/12 00:00	04/12/12 13:27	11096-82-5	
Surrogates								
Tetrachloro-m-xylene (S)	114	%	60-120	1	04/11/12 00:00	04/12/12 13:27	877-09-8	
Decachlorobiphenyl (S)	111	%	57-115	1	04/11/12 00:00	04/12/12 13:27	2051-24-3	

ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: GW-3 FP-1 **Lab ID:** 60118562005 Collected: 04/02/12 09:25 Received: 04/02/12 10:43 Matrix: Non Aqueous Liquid

Results reported on a "dry-weight" basis

Comments:

- SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB								
Analytical Method: EPA 8082 Preparation Method: EPA 3580								
PCB-1016 (Aroclor 1016)	3.2	mg/kg	1.0	1	04/11/12 00:00	04/12/12 14:05	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 14:05	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 14:05	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 14:05	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 14:05	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 14:05	11097-69-1	
PCB-1260 (Aroclor 1260)	51.2	mg/kg	10.0	10	04/11/12 00:00	04/12/12 14:51	11096-82-5	
Surrogates								
Tetrachloro-m-xylene (S)	116	%	60-120	1	04/11/12 00:00	04/12/12 14:05	877-09-8	
Decachlorobiphenyl (S)	118	%	57-115	1	04/11/12 00:00	04/12/12 14:05	2051-24-3	S2

ANALYTICAL RESULTS

Project: QAS
Pace Project No.: 60118562

Sample: EP R-1 FP-1 **Lab ID:** 60118562006 Collected: 04/02/12 10:00 Received: 04/02/12 10:43 Matrix: Non Aqueous Liquid

Results reported on a "dry-weight" basis

Comments: .
• SAMPLE MATRIX IS AN OILY SLUDGE.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB Analytical Method: EPA 8082 Preparation Method: EPA 3580								
PCB-1016 (Aroclor 1016)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 15:08	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 15:08	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 15:08	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 15:08	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 15:08	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	mg/kg	1.0	1	04/11/12 00:00	04/12/12 15:08	11097-69-1	
PCB-1260 (Aroclor 1260)	1.2	mg/kg	1.0	1	04/11/12 00:00	04/12/12 15:08	11096-82-5	
Surrogates								
Tetrachloro-m-xylene (S)	127	%	60-120	1	04/11/12 00:00	04/12/12 15:08	877-09-8	S2
Decachlorobiphenyl (S)	125	%	57-115	1	04/11/12 00:00	04/12/12 15:08	2051-24-3	S2

QUALITY CONTROL DATA

Project: QAS
Pace Project No.: 60118562

QC Batch: MERP/6166 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 60118562001, 60118562002, 60118562003

METHOD BLANK: 979075 Matrix: Water
Associated Lab Samples: 60118562001, 60118562002, 60118562003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	2.0	04/09/12 17:21	

LABORATORY CONTROL SAMPLE: 979076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	15	15.4	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 979077 979078

Parameter	Units	60118562001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	15	15	15.6	15.2	104	101	75-125	2	19	

QUALITY CONTROL DATA

Project: QAS
Pace Project No.: 60118562

QC Batch: MPRP/17552 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 60118562001, 60118562002, 60118562003

METHOD BLANK: 976393 Matrix: Water
Associated Lab Samples: 60118562001, 60118562002, 60118562003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	04/10/12 18:40	
Barium	mg/L	ND	2.5	04/10/12 18:40	
Cadmium	mg/L	ND	0.050	04/10/12 18:40	
Chromium	mg/L	ND	0.10	04/10/12 18:40	
Lead	mg/L	ND	0.50	04/10/12 18:40	
Selenium	mg/L	ND	0.50	04/10/12 18:40	
Silver	mg/L	ND	0.10	04/10/12 18:40	

LABORATORY CONTROL SAMPLE: 976394

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	1	0.94	94	80-120	
Barium	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	1	0.94	94	80-120	
Chromium	mg/L	1	0.96	96	80-120	
Lead	mg/L	1	1.0	101	80-120	
Selenium	mg/L	1	0.95	95	80-120	
Silver	mg/L	.5	0.47	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 976395 976396

Parameter	Units	60118582001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	10	10	9.8	10	98	100	75-125	2	20	
Barium	mg/L	ND	10	10	9.6	9.6	92	92	75-125	1	20	
Cadmium	mg/L	ND	10	10	9.6	9.7	95	97	75-125	2	20	
Chromium	mg/L	ND	10	10	9.0	9.1	90	91	75-125	0	20	
Lead	mg/L	ND	10	10	9.3	9.4	92	94	75-125	1	20	
Selenium	mg/L	ND	10	10	10.1	10.3	101	103	75-125	2	20	
Silver	mg/L	ND	5	5	4.8	4.9	96	98	75-125	2	20	

QUALITY CONTROL DATA

Project: QAS
Pace Project No.: 60118562

QC Batch: MSV/44947 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 60118562001, 60118562002, 60118562003

METHOD BLANK: 982089 Matrix: Water
Associated Lab Samples: 60118562001, 60118562002, 60118562003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	04/14/12 20:13	
1,2-Dichloroethane	ug/L	ND	50.0	04/14/12 20:13	
2-Butanone (MEK)	ug/L	ND	1000	04/14/12 20:13	
Benzene	ug/L	ND	50.0	04/14/12 20:13	
Carbon tetrachloride	ug/L	ND	50.0	04/14/12 20:13	
Chlorobenzene	ug/L	ND	50.0	04/14/12 20:13	
Chloroform	ug/L	ND	200	04/14/12 20:13	
Tetrachloroethene	ug/L	ND	50.0	04/14/12 20:13	
Trichloroethene	ug/L	ND	50.0	04/14/12 20:13	
Vinyl chloride	ug/L	ND	100	04/14/12 20:13	
1,2-Dichloroethane-d4 (S)	%	102	83-120	04/14/12 20:13	
4-Bromofluorobenzene (S)	%	100	82-121	04/14/12 20:13	
Dibromofluoromethane (S)	%	100	85-113	04/14/12 20:13	
Toluene-d8 (S)	%	102	81-117	04/14/12 20:13	

LABORATORY CONTROL SAMPLE: 982090

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	1000	966	97	67-134	
1,2-Dichloroethane	ug/L	1000	937	94	78-123	
2-Butanone (MEK)	ug/L	5000	5990	120	64-125	
Benzene	ug/L	1000	991	99	81-120	
Carbon tetrachloride	ug/L	1000	1070	107	75-130	
Chlorobenzene	ug/L	1000	956	96	83-116	
Chloroform	ug/L	1000	893	89	79-117	
Tetrachloroethene	ug/L	1000	1010	101	81-120	
Trichloroethene	ug/L	1000	968	97	81-120	
Vinyl chloride	ug/L	1000	1030	103	62-134	
1,2-Dichloroethane-d4 (S)	%			99	83-120	
4-Bromofluorobenzene (S)	%			101	82-121	
Dibromofluoromethane (S)	%			100	85-113	
Toluene-d8 (S)	%			100	81-117	

MATRIX SPIKE SAMPLE: 982091

Parameter	Units	60118562003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	1000	905	90	50-134	
1,2-Dichloroethane	ug/L	ND	1000	1020	102	66-126	
2-Butanone (MEK)	ug/L	ND	5000	5520	110	48-121	
Benzene	ug/L	ND	1000	1030	102	53-130	

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REPORT OF LABORATORY ANALYSIS

Page 23 of 30

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QUALITY CONTROL DATA

Project: QAS
Pace Project No.: 60118562

MATRIX SPIKE SAMPLE:		982091					
Parameter	Units	60118562003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	ND	1000	1040	104	46-132	
Chlorobenzene	ug/L	ND	1000	1030	103	32-139	
Chloroform	ug/L	ND	1000	975	98	61-121	
Tetrachloroethene	ug/L	ND	1000	985	98	20-145	
Trichloroethene	ug/L	ND	1000	991	98	38-139	
Vinyl chloride	ug/L	ND	1000	841	84	36-144	
1,2-Dichloroethane-d4 (S)	%				106	83-120	
4-Bromofluorobenzene (S)	%				101	82-121	
Dibromofluoromethane (S)	%				100	85-113	
Toluene-d8 (S)	%				101	81-117	

QUALITY CONTROL DATA

Project: QAS
Pace Project No.: 60118562

QC Batch: OEXT/32756 Analysis Method: EPA 8082
QC Batch Method: EPA 3580 Analysis Description: 8082 GCS PCB Oil
Associated Lab Samples: 60118562004, 60118562005, 60118562006

METHOD BLANK: 980695 Matrix: Non Aqueous Liquid
Associated Lab Samples: 60118562004, 60118562005, 60118562006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	mg/kg	ND	1.0	04/12/12 11:43	
PCB-1221 (Aroclor 1221)	mg/kg	ND	1.0	04/12/12 11:43	
PCB-1232 (Aroclor 1232)	mg/kg	ND	1.0	04/12/12 11:43	
PCB-1242 (Aroclor 1242)	mg/kg	ND	1.0	04/12/12 11:43	
PCB-1248 (Aroclor 1248)	mg/kg	ND	1.0	04/12/12 11:43	
PCB-1254 (Aroclor 1254)	mg/kg	ND	1.0	04/12/12 11:43	
PCB-1260 (Aroclor 1260)	mg/kg	ND	1.0	04/12/12 11:43	
Decachlorobiphenyl (S)	%	103	57-115	04/12/12 11:43	
Tetrachloro-m-xylene (S)	%	106	60-120	04/12/12 11:43	

LABORATORY CONTROL SAMPLE: 980696

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	mg/kg	5	6.4	128	75-146	
PCB-1260 (Aroclor 1260)	mg/kg	5	6.2	125	68-149	
Decachlorobiphenyl (S)	%			114	57-115	
Tetrachloro-m-xylene (S)	%			116	60-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 980697 980698

Parameter	Units	60118562005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	mg/kg	3.2	5	5	9.7	9.0	129	116	64-159	7	24	
PCB-1260 (Aroclor 1260)	mg/kg	51.2	5	5	38.9	40.6	-245	-212	67-136	4	27	M3
Decachlorobiphenyl (S)	%						134	114	57-115			1e
Tetrachloro-m-xylene (S)	%						134	114	60-120			1e

QUALITY CONTROL DATA

Project: QAS
Pace Project No.: 60118562

QC Batch: OEXT/32703 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 TCLP MSSV
Associated Lab Samples: 60118562001, 60118562002, 60118562003

METHOD BLANK: 978928 Matrix: Water
Associated Lab Samples: 60118562001, 60118562002, 60118562003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	100	04/11/12 23:35	
2,4,5-Trichlorophenol	ug/L	ND	500	04/11/12 23:35	
2,4,6-Trichlorophenol	ug/L	ND	100	04/11/12 23:35	
2,4-Dinitrotoluene	ug/L	ND	100	04/11/12 23:35	
2-Methylphenol(o-Cresol)	ug/L	ND	100	04/11/12 23:35	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	200	04/11/12 23:35	
Hexachloro-1,3-butadiene	ug/L	ND	100	04/11/12 23:35	
Hexachlorobenzene	ug/L	ND	100	04/11/12 23:35	
Hexachloroethane	ug/L	ND	100	04/11/12 23:35	
Nitrobenzene	ug/L	ND	100	04/11/12 23:35	
Pentachlorophenol	ug/L	ND	500	04/11/12 23:35	
Pyridine	ug/L	ND	100	04/11/12 23:35	
2,4,6-Tribromophenol (S)	%	94	38-126	04/11/12 23:35	
2-Fluorobiphenyl (S)	%	84	43-120	04/11/12 23:35	
2-Fluorophenol (S)	%	85	40-120	04/11/12 23:35	
Nitrobenzene-d5 (S)	%	90	42-120	04/11/12 23:35	
Phenol-d6 (S)	%	88	41-120	04/11/12 23:35	
Terphenyl-d14 (S)	%	92	38-120	04/11/12 23:35	

LABORATORY CONTROL SAMPLE: 978929

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	500	369	74	42-120	
2,4,5-Trichlorophenol	ug/L	500	424J	85	51-120	
2,4,6-Trichlorophenol	ug/L	500	422	84	50-120	
2,4-Dinitrotoluene	ug/L	500	420	84	53-120	
2-Methylphenol(o-Cresol)	ug/L	500	413	83	46-120	
3&4-Methylphenol(m&p Cresol)	ug/L	500	408	82	35-120	
Hexachloro-1,3-butadiene	ug/L	500	366	73	43-120	
Hexachlorobenzene	ug/L	500	429	86	51-120	
Hexachloroethane	ug/L	500	340	68	38-120	
Nitrobenzene	ug/L	500	412	82	47-120	
Pentachlorophenol	ug/L	500	378J	76	39-123	
Pyridine	ug/L	500	241	48	1-120	
2,4,6-Tribromophenol (S)	%			90	38-126	
2-Fluorobiphenyl (S)	%			84	43-120	
2-Fluorophenol (S)	%			76	40-120	
Nitrobenzene-d5 (S)	%			80	42-120	
Phenol-d6 (S)	%			79	41-120	
Terphenyl-d14 (S)	%			92	38-120	

QUALITY CONTROL DATA

Project: QAS
Pace Project No.: 60118562

MATRIX SPIKE SAMPLE:		979275					
Parameter	Units	60118562001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	500	377	75	46-120	
2,4,5-Trichlorophenol	ug/L	ND	500	453J	91	38-120	
2,4,6-Trichlorophenol	ug/L	ND	500	434	87	42-120	
2,4-Dinitrotoluene	ug/L	ND	500	441	88	45-120	
2-Methylphenol(o-Cresol)	ug/L	ND	500	397	79	42-120	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	500	392	78	20-125	
Hexachloro-1,3-butadiene	ug/L	ND	500	375	75	47-120	
Hexachlorobenzene	ug/L	ND	500	409	82	49-120	
Hexachloroethane	ug/L	ND	500	365	73	39-120	
Nitrobenzene	ug/L	ND	500	398	80	29-127	
Pentachlorophenol	ug/L	ND	500	469J	94	36-130	
Pyridine	ug/L	ND	500	170	34	1-120	
2,4,6-Tribromophenol (S)	%				87	38-126	
2-Fluorobiphenyl (S)	%				82	43-120	
2-Fluorophenol (S)	%				73	40-120	
Nitrobenzene-d5 (S)	%				76	42-120	
Phenol-d6 (S)	%				72	41-120	
Terphenyl-d14 (S)	%				86	38-120	

QUALITY CONTROL DATA

Project: QAS
Pace Project No.: 60118562

QC Batch: PMST/7121 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60118562001, 60118562002, 60118562003

METHOD BLANK: 976114 Matrix: Solid
Associated Lab Samples: 60118562001, 60118562002, 60118562003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	04/04/12 00:00	

SAMPLE DUPLICATE: 976115

Parameter	Units	60118517036 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	2.4	2.5	3	20	

QUALIFIERS

Project: QAS
Pace Project No.: 60118562

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1e	Surrogate recovery outside laboratory control limits due to matrix interferences.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: QAS
Pace Project No.: 60118562

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60118562004	GW-4 FP-1	EPA 3580	OEXT/32756	EPA 8082	GCSV/12253
60118562005	GW-3 FP-1	EPA 3580	OEXT/32756	EPA 8082	GCSV/12253
60118562006	EP R-1 FP-1	EPA 3580	OEXT/32756	EPA 8082	GCSV/12253
60118562001	GW-4 FP-1	EPA 3010	MPRP/17552	EPA 6010	ICP/14911
60118562002	GW-3 FP-1	EPA 3010	MPRP/17552	EPA 6010	ICP/14911
60118562003	EP R-1 FP-1	EPA 3010	MPRP/17552	EPA 6010	ICP/14911
60118562001	GW-4 FP-1	EPA 7470	MERP/6166	EPA 7470	MERC/6129
60118562002	GW-3 FP-1	EPA 7470	MERP/6166	EPA 7470	MERC/6129
60118562003	EP R-1 FP-1	EPA 7470	MERP/6166	EPA 7470	MERC/6129
60118562001	GW-4 FP-1	EPA 3510	OEXT/32703	EPA 8270	MSSV/10248
60118562002	GW-3 FP-1	EPA 3510	OEXT/32703	EPA 8270	MSSV/10248
60118562003	EP R-1 FP-1	EPA 3510	OEXT/32703	EPA 8270	MSSV/10248
60118562001	GW-4 FP-1	EPA 8260	MSV/44947		
60118562002	GW-3 FP-1	EPA 8260	MSV/44947		
60118562003	EP R-1 FP-1	EPA 8260	MSV/44947		
60118562001	GW-4 FP-1	ASTM D2974-87	PMST/7121		
60118562002	GW-3 FP-1	ASTM D2974-87	PMST/7121		
60118562003	EP R-1 FP-1	ASTM D2974-87	PMST/7121		
60118562001	GW-4 FP-1	EPA 1010	WET/34518		
60118562002	GW-3 FP-1	EPA 1010	WET/34518		
60118562003	EP R-1 FP-1	EPA 1010	WET/34518		



Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

April 16, 2012

Angie Brown
Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219

RE: Project 20137269
Project ID: 60118562/BURNS & MCDONNELL

Dear Angie Brown:

Enclosed are the analytical results for sample(s) received by the laboratory on April 02, 2012.
Results reported herein conform to the most current NELAC standards, where applicable, unless
otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Karen Brown", written in a cursive style.

Karen Brown
karen.brown@pacelabs.com



REPORT OF LABORATORY ANALYSIS

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Cover No Results 4/16/2012 15:41



Laboratory Certifications

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20137269

Client: PASI Kansas

Project ID: 60118562/BURNS & MCDONNELL

Washington Department of Ecology C2078
Oregon Environmental Laboratory Accreditation - LA200001
U.S. Dept. of Agriculture Foreign Soil Import P330-10-00119
Pennsylvania Dept. of Env Protection (NELAC) 68-04202
Texas Commission on Env. Quality (NELAC) T104704405-09-TX
Kansas Department of Health and Environment (NELAC) E-10266
Florida Department of Health (NELAC) E87595
Oklahoma Department of Environmental Quality - 2010-139
Illinois Environmental Protection Agency - 0025721
California Env. Lab Accreditation Program Branch - 11277CA
Louisiana Dept. of Environmental Quality (NELAC/LELAP) 02006

4/16/2012 15:41:43



REPORT OF LABORATORY ANALYSIS

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Sample Cross Reference

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20137269

Client: PASI Kansas

Project ID: 60118562/BURNS & MCDONNELL

Client Sample ID	Lab ID	Matrix	Collection Date/Time	Received Date/Time
GW-4 FP-1	20976852	Other	02-Apr-12 08:45	02-Apr-12 10:01
GW-3 FP-1	20976853	Other	02-Apr-12 09:25	02-Apr-12 10:01
EP R-1 FP-1	20976854	Other	02-Apr-12 10:00	02-Apr-12 10:01



Project Narrative

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20137269

Sample Receipt Condition:

All samples were received in accordance with EPA protocol.

Holding Times:

All holding times were met.

Blanks:

All blank results were below reporting limits.

Laboratory Control Samples:

All LCS recoveries were within QC limits.

Matrix Spikes and Duplicates:

All MS/MSD recoveries or duplicate RPDs were within QC limits.

Surrogates:

All surrogate recoveries were within QC limits.



QC Cross Reference

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20137269

Analytical Method	Batch	Sample used for QC
EPA 8081	181732	Project sample EP R-1 FP-1
EPA 8151	181733	Project sample GW-3 FP-1

Narrative1 4/16/2012 15:42:55

For the sample used as the original for the DUP or MS/MSD for the batch:

Project sample means a sample from this project was used.

Client sample means a sample from the same client but in a different project was used.

Batch sample means a sample from a different client was used.



Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Kansas

Client ID: GW-4 FP-1

Project: 20137269

Project ID: 60118562/BURNS & MCDONNELL

Site: None

Lab ID: 20976852 (TCLP)

Matrix: Other

% Moisture: n/a

Description: None

Prep Level: TCLP

Batch: 181732

Method: EPA 8081 (TCLP)

Collected: 02-Apr-12

Received: 02-Apr-12

8081 Pests TCLP

Prepared: 10-Apr-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	MDL	Reg Limit	Analysis
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	0.000250	0.400	13-Apr-12 14:07 TWB
57-74-9	Chlordane	1	ND		0.00500	0.00250	0.0300	13-Apr-12 14:07 TWB
72-20-8	Endrin	1	ND		0.00100	0.000500	0.0200	13-Apr-12 14:07 TWB
76-44-8	Heptachlor	1	ND		0.000500	0.000250	0.00800	13-Apr-12 14:07 TWB
1024-57-3	Heptachlor epoxide	1	ND		0.000500	0.000250	0.00800	13-Apr-12 14:07 TWB
72-43-5	Methoxychlor	1	ND		0.00500	0.00250	10.0	13-Apr-12 14:07 TWB
8001-35-2	Toxaphene	1	ND		0.0200	0.0100	0.500	13-Apr-12 14:07 TWB

7 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
MDL denotes method detection limit

Protocol 4/16/2012 15:42:56
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Kansas

Client ID: GW-4 FP-1

Project: 20137269

Project ID: 60118562/BURNS & MCDONNELL

Site: None

Lab ID: 20976852 (TCLP)

Matrix: Other

% Moisture: n/a

Description: None

Prep Level: TCLP

Batch: 181733

Method: EPA 8151 (TCLP)

Collected: 02-Apr-12

Received: 02-Apr-12

8151 Herbs TCLP

Prepared: 10-Apr-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	MDL	Reg Limit	Analysis
94-75-7	2,4-D	1	ND		0.0200	0.0100	10.0	11-Apr-12 19:39 SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.0200	0.0100	1.00	11-Apr-12 19:39 SPP1

2 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
MDL denotes method detection limit

Protocol 4/16/2012 15:42:56
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Kansas

Client ID: GW-3 FP-1

Project: 20137269

Project ID: 60118562/BURNS & MCDONNELL

Site: None

Lab ID: 20976853 (TCLP)

Matrix: Other

% Moisture: n/a

Description: None

Prep Level: TCLP

Batch: 181732

Method: EPA 8081 (TCLP)

Collected: 02-Apr-12

Received: 02-Apr-12

8081 Pests TCLP

Prepared: 10-Apr-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	MDL	Reg Limit	Analysis
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	0.000250	0.400	13-Apr-12 14:20 TWB
57-74-9	Chlordane	1	ND		0.00500	0.00250	0.0300	13-Apr-12 14:20 TWB
72-20-8	Endrin	1	ND		0.00100	0.000500	0.0200	13-Apr-12 14:20 TWB
76-44-8	Heptachlor	1	ND		0.000500	0.000250	0.00800	13-Apr-12 14:20 TWB
1024-57-3	Heptachlor epoxide	1	ND		0.000500	0.000250	0.00800	13-Apr-12 14:20 TWB
72-43-5	Methoxychlor	1	ND		0.00500	0.00250	10.0	13-Apr-12 14:20 TWB
8001-35-2	Toxaphene	1	ND		0.0200	0.0100	0.500	13-Apr-12 14:20 TWB

7 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
MDL denotes method detection limit

Protocol 4/16/2012 15:42:56
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Kansas

Client ID: GW-3 FP-1

Project: 20137269

Project ID: 60118562/BURNS & MCDONNELL

Site: None

Lab ID: 20976853 (TCLP)

Matrix: Other

% Moisture: n/a

Description: None

Prep Level: TCLP

Batch: 181733

Method: EPA 8151 (TCLP)

Collected: 02-Apr-12

Received: 02-Apr-12

8151 Herbs TCLP

Prepared: 10-Apr-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	MDL	Reg Limit	Analysis
94-75-7	2,4-D	1	ND		0.0200	0.0100	10.0	11-Apr-12 20:44 SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.0200	0.0100	1.00	11-Apr-12 20:44 SPP1

2 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
MDL denotes method detection limit

Protocol 4/16/2012 15:42:56
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Kansas

Client ID: EP R-1 FP-1

Project: 20137269

Project ID: 60118562/BURNS & MCDONNELL

Site: None

Lab ID: 20976854 (TCLP)

Matrix: Other

% Moisture: n/a

Description: None

Prep Level: TCLP

Batch: 181732

Method: EPA 8081 (TCLP)

Collected: 02-Apr-12

Received: 02-Apr-12

8081 Pests TCLP

Prepared: 10-Apr-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	MDL	Reg Limit	Analysis
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	0.000250	0.400	13-Apr-12 14:33 TWB
57-74-9	Chlordane	1	ND		0.00500	0.00250	0.0300	13-Apr-12 14:33 TWB
72-20-8	Endrin	1	ND		0.00100	0.000500	0.0200	13-Apr-12 14:33 TWB
76-44-8	Heptachlor	1	ND		0.000500	0.000250	0.00800	13-Apr-12 14:33 TWB
1024-57-3	Heptachlor epoxide	1	ND		0.000500	0.000250	0.00800	13-Apr-12 14:33 TWB
72-43-5	Methoxychlor	1	ND		0.00500	0.00250	10.0	13-Apr-12 14:33 TWB
8001-35-2	Toxaphene	1	ND		0.0200	0.0100	0.500	13-Apr-12 14:33 TWB

7 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
MDL denotes method detection limit

Protocol 4/16/2012 15:42:57
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Kansas

Client ID: EP R-1 FP-1

Project: 20137269

Project ID: 60118562/BURNS & MCDONNELL

Site: None

Lab ID: 20976854 (TCLP)

Matrix: Other

% Moisture: n/a

Description: None

Prep Level: TCLP

Batch: 181733

Method: EPA 8151 (TCLP)

Collected: 02-Apr-12

Received: 02-Apr-12

8151 Herbs TCLP

Prepared: 10-Apr-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	MDL	Reg Limit	Analysis
94-75-7	2,4-D	1	ND		0.0200	0.0100	10.0	11-Apr-12 21:49 SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.0200	0.0100	1.00	11-Apr-12 21:49 SPP1

2 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
MDL denotes method detection limit

Protocol 4/16/2012 15:42:57
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 181732

Project: 20137269

Method: TCLP GC Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20976874	181732 BLANK 1		68	72	60	64				
20976875	181732 LCS 1		58	66	51	52				
20976854	EP R-1 FP-1		70	70	46	46				
20976876	EP R-1 FP-1 MS 1		63	68	52	52				
20976877	EP R-1 FP-1 MSD 1		61	64	49	50				
20976853	GW-3 FP-1		66	70	53	54				
20976852	GW-4 FP-1		57	59	33	47				
QC limits:			10-137	10-137	18-119	18-119				
Sur 1: Decachlorobiphenyl (Conf)(S)										
Sur 2: Decachlorobiphenyl (S)										
Sur 3: Tetrachloro-m-xylene (Conf)(S)										
Sur 4: Tetrachloro-m-xylene (S)										

* denotes surrogate recovery outside of QC limits.

D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.

Surrogates 4/16/2012 15:42:58



Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 181733

Project: 20137269

Method: TCLP GC Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20976878	181733 BLANK 1		78	71						
20976879	181733 LCS 1		59	60						
20976854	EP R-1 FP-1		64	67						
20976853	GW-3 FP-1		80	80						
20976880	GW-3 FP-1 MS 1		67	68						
20976881	GW-3 FP-1 MSD 1		69	68						
20976852	GW-4 FP-1		79	78						

QC limits:

10-166

10-166

Sur 1: 2,4-DCPA (Conf)(S)

Sur 2: 2,4-DCPA (S)

* denotes surrogate recovery outside of QC limits.

D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.



Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 181732 **Project:** 20137269 **LCS:** 20976875 13-Apr-12 13:53
Method: TCLP GC Semivolatile Organics **MS:** 20976876 13-Apr-12 14:47
Units: mg/L **MSD:** 20976877 13-Apr-12 15:00
Original for MS: Client Sample 20976854

Parameter Name	LCS	LCS	LCS	MS	Sample	MS	MSD	MS	MSD	QC Limits		Max	Qu
	Spike	Found	%Rec	Spike	Found	Found	Found	%Rec	%Rec	RPD	LCS	MS/MSD	RPD
gamma-BHC (Lindane)	0.00500	0.00362	72	0.00500		0.00380	0.00348	76	70	9	26-134	18-154	20
Endrin	0.00500	0.00283	57	0.00500		0.00323	0.00276	65	55	16	27-160	37-155	20
Heptachlor	0.00500	0.00222	45	0.00500		0.00338	0.00278	68	56	19	10-116	10-138	21
Heptachlor epoxide	0.00500	0.00343	69	0.00500		0.00379	0.00333	76	67	13	27-123	21-139	20
Methoxychlor	0.00500	0.00308	62	0.00500		0.00334	0.00286	67	57	16	25-156	21-169	20

5 compound(s) reported

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.



Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 181733 **Project:** 20137269 **LCS:** 20976879 11-Apr-12 19:18
Method: TCLP GC Semivolatile Organics **MS:** 20976880 11-Apr-12 21:06
Units: mg/L **MSD:** 20976881 11-Apr-12 21:27
Original for MS: Client Sample 20976853

Parameter Name	LCS	LCS	LCS	MS	Sample	MS	MSD	MS	MSD	QC Limits		Max	Qu
	Spike	Found	%Rec	Spike	Found	Found	Found	%Rec	%Rec	RPD	LCS	MS/MSD	RPD
2,4-D	0.200	0.136	68	0.200		0.156	0.153	78	77	2	10-159	10-167	27
2,4,5-TP (Silvex)	0.0200	0.0147	74	0.0200		0.0171	0.0172	86	86	1	30-165	31-168	20
2 compound(s) reported													

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.



Blank Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Blank ID: 181732 BLANK 1

Project: 20137269

Lab ID: 20976874

Prep Level: TCLP

Batch: 181732

Method: TCLP GC Semivolatile Organics

Prepared: 10-Apr-12

						Units: <u>mg/L</u>			
CAS Numb	Analyte	Dilution	Result	Qu	Reporting Limit	MDL	Analysis		
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	0.000250	13-Apr-12	13:40	TWB
57-74-9	Chlordane	1	ND		0.00500	0.00250	13-Apr-12	13:40	TWB
72-20-8	Endrin	1	ND		0.00100	0.000500	13-Apr-12	13:40	TWB
76-44-8	Heptachlor	1	ND		0.000500	0.000250	13-Apr-12	13:40	TWB
1024-57-3	Heptachlor epoxide	1	ND		0.000500	0.000250	13-Apr-12	13:40	TWB
72-43-5	Methoxychlor	1	ND		0.00500	0.00250	13-Apr-12	13:40	TWB
8001-35-2	Toxaphene	1	ND		0.0200	0.0100	13-Apr-12	13:40	TWB

7 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
MDL denotes method detection limit

Protocol Blank 4/16/2012 15:43:00
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Blank Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Blank ID: 181733 BLANK 1

Project: 20137269

Lab ID: 20976878

Prep Level: TCLP

Batch: 181733

Method: TCLP GC Semivolatile Organics

Prepared: 10-Apr-12

		Units: <u>mg/L</u>					
CAS Numb	Analyte	Dilution	Result	Qu	Reporting Limit	MDL	Analysis
94-75-7	2,4-D	1	ND		0.0200	0.0100	11-Apr-12 18:56 SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.0200	0.0100	11-Apr-12 18:56 SPP1
2 compound(s) reported							

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
MDL denotes method detection limit

Protocol Blank 4/16/2012 15:43:00
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Definitions/Qualifiers

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20137269

Value	Description
J	This estimated value for the analyte is below the adjusted reporting limit but above the instrument reporting limit.
U	The analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
B	This analyte was detected in the method blank.
E	The sample concentration is above the linear calibrated range of the analysis.
LCS	Laboratory Control Sample.
MS(D)	Matrix Spike (Duplicate).
DUP	Sample Duplicate.
RPD	Relative Percent Difference.

Chains of Custody

20137269 PASI-KANS



20137269

Pace Analytical
www.pacelabs.com

Workorder: 60118562

Workorder Name:QAS

Owner Received ~~Date: 4/2/2012~~ Results Requested By: 4/16/2012

[illegible]



Sample Cor

1000 Riverbend, Blvd., Suite F
St. Rose, LA 70087Courier: ☐ Pace Courier ☐ Hackbarth ☒ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC]

Custody Seals Intact: ☒ Yes ☐ NoThermometer
Used:

- ☒
- Therm Fisher IR 1
-
- ☐
- Therm Fisher IR 2
-
- ☐
- Therm Fisher IR 4

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining
contents: 4-10-12

Temp must be measured from Temperature blank when present

Comments:

Temperature Blank Present?"	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10
All containers received within manufacture's precautionary and/or expiration dates.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11
All containers needing preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13
		If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No If added record lot no.: HNO3 _____ H2SO4 _____
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17
Pace Trip Blank Lot # (if purchased):	<u>N/A</u>	18

Client Notification/ Resolution:

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____



Sample Condition Upon Receipt

532P-4

Client Name: B+MCO

Project # 6018562

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: _____ Pace Shipping Label Used? ☐ Yes ☒ No

Custody Seal on Cooler/Box Present: ☒ Yes ☐ No Seals intact: ☒ Yes ☐ No

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ Foam ☐ None ☐ Other

Thermometer Used: T-191 / T-194

Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 1.6

Temperature should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: W 4/2/12 BSO

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
-Includes date/time/ID/analyses Matrix: <u>oil / sludge</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>MA</u> Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Pace Trip Blank lot # (if purchased): <u>MA</u>		
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State: <u>NC</u>

Client Notification/ Resolution:

Copy COC to Client?

Y

N

Field Data Required?

Y

N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution:

ADDED FULL TCEP.

Project Manager Review: _____

Date: 4/2/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)